



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/709,634	11/13/2000	Atsuya Yamashita	040373/0294	4201
22428	7590	03/03/2004	EXAMINER	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			DINH, JOSEPH	
			ART UNIT	PAPER NUMBER
			2663	

DATE MAILED: 03/03/2004

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/709,634

Applicant(s)

YAMASHITA, ATSUYA

Examiner

Joseph H. Dinh

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2000.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-3, 7, 8, 11-13, 15, 21, 23, 25 and 27 is/are rejected.
7) ☒ Claim(s) 4-6, 9-10, 14, 16-20, 22, 24, 26, 28-32 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 13 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3 & 4.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claims 1, 7, 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Congdon et al. (US Patent No. 6,151,297) in view of Yoshida et al. (US Patent No. 6,301,620 B1).

a) **Regarding to claim 1**, Congdon et al disclose link 38 (*a local bus*) is provided for which NICs or multi-port NICs are installed in a server 32 (*an information processing device*). The number of NICs in a system is limited by the number of slots in the server and the number of ports (*a plurality of Ether ports*) on the switch. The NICs in the group are connected directly to a switch 44 (*an I/F apparatus*) which treats the group as a single logical port, i.e. trunk. See Fig.3, column 6, line 1-6, and line 27-29. The switch holds an address table 79 which contains a list of MAC addresses and the ports by which they can be reached. The switch looks up the DA in the address table to find the destination output port. If the DA is not found, the switch floods the packets to all output ports. If the DA is found, the switch sends the packet only to the port listed in the table. See column 7, line 38-45.

b) Congdon et al. fail to explicitly disclose the controller in the I/F apparatus to transfer an Ether frame to a MAC address or a port before referring to a MAC to port table memory.

Yoshida et al. disclose that the port managing means 300 comprises a terminal port number controller 1107 (*a controller*). See Fig. 1, column 5, line 7-8. They also disclose a local memory 132 (*a MAC to port table memory*). See Fig.15, and column 1, line 24-25.

c) It would have been obvious to an ordinary one skilled in the art to modify the I/F apparatus of Congdon by using the disclosure of Yoshida in the I/F apparatus so that it can select a port or an MAC address to which an Ether frame to be transferred in the group based upon the source address.

Regarding to claim 7, Congdon et al. disclose that when receiving packets, the server driver only accepts broadcast packets on one of the links (*a broadcast MAC address*). See column 7, line 18-20.

Regarding to claim 11, Congdon et al. disclose that when traffic from a client arrives at the server (*at switching on power of said information processing device*), the switch executes a deterministic algorithm on the data packet transmitting the traffic. See column 4, line 32-36.

2. **Claims 2, 8, 12, 15**, are rejected under 35 U.S.C. 103(a) as being unpatentable over Congdon et al. (US Patent No. 6,151,297) in view of Yoshida et al. (US Patent No. 6,301,620 B1).

a) **Regarding to claim 2**, Congdon et al. disclose a single switch 50 (*an I/F apparatus*) is connected to a server 52 via a link 54 (*a local bus*). The link to the server is configured as a trunk in which the load balancing algorithm uses the source address of the clients 56 (*a plurality of information processing devices*). Multiple NICs in the server program their MAC address such that they are the same on all interfaces. Therefore, the same MAC address used for the server's source is applied to port 62 (*a bus port*). When a client sends a packet via a hub 58, 60 (*hubs*) to

Art Unit: 2663

the server, the switch selects one of the multiple ports (*a plurality of Ether ports*) by examining the client's MAC address. See Fig.5, and column 8, line 29-38.

b) Congdon et al. fail to explicitly disclose a controller and an MAC to port table memory in the switch 50 so that the switch can select one port to transfer the MAC address.

Yoshida et al. disclose Yoshida et al. disclose that the port managing means 300 comprises a terminal port number controller 1107 (*a controller*). See Fig. 1, column 5, line 7-8. They also disclose a local memory 132 (*a MAC to port table memory*). See Fig.15, and column 1, line 24-25.

c) It would have been obvious to an ordinary one skilled in the art will readily appreciate that the claimed invention may be implemented using the disclosure of Yoshida with the switch so that the I/F apparatus would transfer an Ether frame to an MAC address or a port before referring to the MAC to port table memory.

Regarding to claim 8, Congdon et al. disclose that when receiving packets, the server driver only accepts broadcast packets on one of the links (*a broadcast MAC address*). See column 7, line 18-20.

Regarding to claim 12, Congdon et al. disclose that when traffic from a client arrives at the server (*at switching on power of said information processing device*), the switch executes a deterministic algorithm on the data packet transmitting the traffic. See column 4, line 32-36.

3. **Claims 3, 21, 13, 23, 25, 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Congdon et al. US Patent No. 6,151,297 in view of Yoshida et al. (US Patent No. 6,301,620 B1).

a) **Regarding to claims 3 and 21**, Congdon et al. disclose a trunking system 28 in which data are transmitted between the server 12 (*an information processing device*) and the clients 22 (*a plurality of information processing devices*) via a genetic switch 24 (*I/F apparatus*). Multiple links 18, 26 (*local bus*) link the switch to the server. Software driver 16 controls the flow of data to and from the server through these links. See Fig. 2, and column 1, line 63-67 and column 2, line 1-5. The driver and the switch examine the MAC address fields to select a link. See column 4, line 30-32.

b) Congdon et al. fail to explicitly disclose a controller and an MAC to port table memory in the I/F apparatus to transfer an Ether frame to a MAC address or a port before referring to an MAC to port table memory.

Yoshida et al. disclose Yoshida et al. disclose that the port managing means 300 comprises a terminal port number controller 1107 (*a controller*). See Fig. 1, column 5, line 7-8. They also disclose a local memory 132 (*a MAC to port table memory*). See Fig.15, and column 1, line 24-25.

c) It would have been obvious to an ordinary one skilled in the art to modify the Congdon device by teaching the disclosure of Yoshida so that it could control the flow of data information between an MAC address or a port and an Ether frame

Regarding to claims 9 and 23, Congdon et al. disclose when receiving packets, the server driver only accepts broadcast packets on one of the links (*a broadcast MAC address*). See column 7, line 18-20.

Regarding to claims 13 and 25, Congdon et al. disclose that when traffic from a client arrives at the server (*at switching on power of said information processing device*), the switch

Art Unit: 2663

executes a deterministic algorithm on the data packet transmitting the traffic. See column 4, line 32-36.

Regarding to claim 23, Congdon et al. disclose when receiving packets, the server driver only accepts broadcast packets on one of the links (*a broadcast MAC address*). See column 7, line 18-20.

Regarding to claim 27, Congdon et al. disclose that when traffic from a client arrives at the server (*at switching on power of said information processing device*), the switch executes a deterministic algorithm on the data packet transmitting the traffic. See column 4, line 32-36.

Regarding to claim 25, Congdon et al. disclose that when traffic from a client arrives at the server (*at switching on power of said information processing device*), the switch executes a deterministic algorithm on the data packet transmitting the traffic. See column 4, line 32-36.

Allowable Subject Matter

4. **Claims 4-6, 10, 14-20, 22, 24, 26, 28-32** are objected to as being dependent upon rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph H. Dinh whose telephone number is 703-305-8964. The examiner can normally be reached on Monday-Friday, 9:00 AM to 6:00 PM.

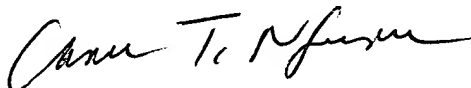
Art Unit: 2663

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 703-308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joseph H. Dinh
Assistant Examiner
Art Unit 2663

J. H. D.



CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600